## AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1-11 Cancelled.

12. (Currently Amended) A method for calculating input signals to at least two light projectors for spreading fluctuations in color intensity over an area, thereby creating a substantially invisible transition zone between them, said method comprising:

calculating input signals to each of the at least two light projectors for a projected image in a predetermined transition zone based on a blending function that controls emitted light directed toward said predetermined transition zone from each of at least two light projectors;

wherein the input signals to at least two light projectors are provided from tabulating said blending function using red light, green light, blue light and a blending factor to produce a tabulated blending function,

wherein said blending function for each of at least two light projectors at each point within said transition zone provides a sum constituting a transfer function in the point, so as to obtain predictable projected image characteristics in the transition zone, and wherein said tabulated blending function is calculated from a downhill optimization algorithm, and wherein the projected image at each point in said transition zone is constituted by the contribution from each of the at least two light projectors, and

wherein the amount of the contribution from each of the at least two light projectors is determined by choosing said blending factor for each point.

13. (Previously Presented) The method according to claim 12, wherein the

input signals to the at least two light projectors are provided by interpolating the blending function.

14. (Previously Presented) The method according to claim 12 wherein the blending function is only used ahead of time and not during an edge blending process when calculating input signals to said light projectors.

15. (Previously Presented) The method according to claim 12 wherein the blending function is obtained by measuring the relationship between input image data and emitted light characteristics.

16. (Previously Presented) The method according to claim 12, wherein the blending function is applied to input data to the at least two light projectors, thereby conditioning the data to obtain the required image characteristics.

17. (Previously Presented) The method according to claim 12, further comprising the step of interpolating between the light characteristics of at least a first light projector to the light characteristics of at least a second light projector over the image transition zone area, thereby providing a smooth transition between the projected images.

18. (Previously Presented) The method according to claim 12, wherein the blending function is determined by applying a known signal to the projector, measuring the emitted light characteristics and calculating said blending function from the measured relationship between the applied signal and measured light characteristics.

19. (Previously Presented) The method according to claim 18, wherein the applied signal is a ramp from zero output intensity to full output intensity of the

projector.

20. (Previously Presented) The method according to claim 18, wherein the blending function is measured and calculated as an automatic part of the projector start up procedure.

21. (Currently Amended) A control device for at least two image projectors adapted to spread fluctuations in color intensity over an area of a surface, thereby creating a substantially invisible transition zone between them, the device comprising:

memory means for storing tabulated blending functions for each projector, wherein each blending function describes the relationship between an input signal and emitted light characteristics of each light projector, the sum of said tabulated blending functions describing the blending function, and

control means for applying said tabulated blending functions on said input signal to each light projector so as to obtain predictable image characteristics in the transition zone between the at least two projected images <u>wherein the input signals to at least two light projectors are provided from tabulating said blending function using red light, green light, blue components and a blending factor to produce a tabulated blending function,</u>

<u>wherein said blending function for each of at least two light projectors at each point within said transition zone provides a sum constituting a transfer function in the point, so as to obtain predictable projected image characteristics in the transition zone, and wherein said tabulated blending function is calculated from a downhill optimization algorithm</u>.

22. (Currently Amended) A method of controlling emitted light directed toward a predetermined transition zone from each of at least two light projectors for spreading fluctuations in color intensity over an area, thereby creating a

substantially invisible transition zone between them, said method comprising:

(a) providing an equation of formula (I)

$$\cancel{TF(RGB_{blendpixel}) = [TF(RGB_{original})]^{*}\ \beta, \quad (I)}$$

$$\underline{RBG_{blendpixel}(RBG_{original,\beta}) = TF^{-1}(TF(RBG_{original})^{*}\beta) \qquad (I)}$$

(b) determining the blending function by tabulating the resulting blended pixel colors of formula (I),

(c) interpolating the blending function for non-tabulated blended pixel colors,

(d) providing at least two light projectors for forming a projected image wherein light emitted from the at least two light projectors is controlled by the blending function as determined in steps (b) and (c), and

(e) emitting light from the at least two light projectors controlled by the blending function as determined in steps (b) and (c) in a manner that spreads fluctuations in color intensity over an area to create a substantially invisible transition zone between the at least two light projectors,

and wherein said determining of the blending function of step (b) is tabulated by using a downhill optimization algorithm.

23. (Previously Presented) A method according to claim 22 wherein interpolating the resulting blended pixel is accomplished by an optimization algorithm.

24. (Previously Presented) A method according to claim 23 wherein the optimization algorithm is a simulated annealing optimization algorithm.

25. (Previously Presented) A method according to claim 24, wherein the optimization algorithm is a downhill simplex simulated annealing optimization algorithm.